## REMARKS

Claims 12-26 are pending in the present application. The Examiner has rejected claims 12-26 under 35 U.S.C. §103(a), and rejected claims 12, 14-15, and 17 under the judicially created obviousness-type double patenting doctrine. With this response, Applicant adds new claim 28. No new matter has been introduced. In addition, Applicant submits an accurate English translation of the Korean patent application from which this application claims priority.

**Double Patenting Rejections:**

The Examiner rejected claims 12, 14-15, and 17 under the judicially created obviousness-type double patenting doctrine over claims 1-6 of U.S. Patent No. 6,610,596 (Lee, *et al.*) in view of U.S. Patent No. 6,063,306 (Kaufman, *et al.*) and U.S. Patent No. 6,495,200 (Chan, *et al.*).

Applicant respectfully disagrees. However, to obviate the double patenting rejection, Applicant will consider the filing of a terminal disclaimer, but respectfully requests that such submission be held in abeyance until notification of allowable subject matter for this case.

**Section 103 Rejections:**

Claims 12-18 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,524,376 (Aoki, *et al.*) in view of U.S. Patent Application Publication No. 2003/0022801 (Sun, *et al.*).

Applicant respectfully traverses this rejection.

As mentioned in the Amendment dated December 1, 2003, Aoki does not qualify as a reference because the filing date of Aoki is January 25, 2001, which is after the November 23, 2000 filing date of Korean patent application number 2000-70008 from which the present application claims priority. In the current Action, the Examiner stated that a translation of said papers had not been made of record. Accordingly, Applicant submits an English translation of the priority document with this response. Sun does not disclose "chemical mechanical polishing (CMP) using a solution comprising an oxidizing

agent, a pH controlling agent, a chelate reagent, and deionized water", as recited in Applicant's claim 12. Thus, a *prima facie* case of obviousness cannot be maintained in view of Sun. Reconsideration and withdrawal of this obviousness rejection are respectfully requested.

Claims 12, 16 and 18-26 were also rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,063,306 (Kaufman, *et al.*) in view of U.S. Patent No. 6,495,200 (Chan, *et al.*) and U.S. Patent Application Publication No. 2003/0022801 (Sun, *et al.*).

Applicant respectfully traverses this rejection.

Applicant urges that there is no motivation or suggestion to combine Kaufman, Chan, or Sun to produce the subject matter of Applicant's claim 12. By combining these references in a piecemeal fashion, the Examiner is improperly relying upon hindsight gained from Applicant's disclosure. Further, there is no reasonable expectation that one could reasonably combine these references to make the invention recited in Applicant's claim 12 without undue experimentation. Thus, Applicant urges that a *prima facie* case of obviousness of claim 12 over Kaufman, Chan , and Sun cannot be maintained. Reconsideration and withdrawal of this rejection are respectfully requested.

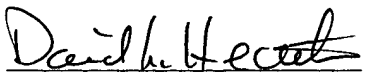
Claims 16 and 18-26 all depend from claim 12, and are thus patentable for at least the same reasons as claim 12. Reconsideration and withdrawal of these obviousness rejections are respectfully requested.

With regard to new claim 28, Kaufman, Chan and Sun, either by themselves or in combination, do not disclose or suggest a method of manufacturing a copper metal interconnection layer including, *inter alia*, forming a copper seed layer on the barrier layer by physical vapor deposition, as recited in claim 28. Thus, Applicant urges that claim 28 is not *prima facie* obvious over Kaufman, Chan, and Sun.

## CONCLUSION

Applicant urges that claims 12-26 and 28 are in condition for allowance for at least the reasons stated. Early and favorable action on this case is respectfully requested.

Respectfully submitted,

By: 

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